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PATENT

Attorney Docket No.: 021706-002200US

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Alexandria, VA 22313-1450

On August 15, 2005

TOWNSEND and TOWNSEND and CREW LLP

By: Sylvia Arnold

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Fuchshuber et al.

Application No.: 10/069,448

Filed: August 7, 2002

For: NON-AQUEOUS LIQUID  
SHAMPOO COMPOSITION

Customer No.: 20350

Confirmation No. 1448

Examiner: Jyothsna A. Venkat

Technology Center/Art Unit: 1615

### DECLARATION

I, Albert Zorko Abram, state and declare as follows:

1. All statements herein made of my own knowledge are true, and statements made on information and belief are believed to be true and correct.

2. I am currently employed by Connetics Australia Pty Ltd, the assignee of the subject application.

3. I am employed as Senior Chemistry Supervisor & IP Support and have been in pharmaceutical research since 1987. I have been employed doing dermatological research and product development for the last 18 years. My curriculum vitae is attached as Exhibit A.

4. I have read and I am familiar with the contents of the above-referenced patent application. In addition, I have read the Office Action dated December 10, 2004 and the Advisory Action dated April 29, 2005. It is my understanding that the Examiner alleges that the claimed invention is obvious over the combination of U.S. Patent No. 5,866,152 ("the '152

patent"), PCT Publication WO 87/04617 ("the '617 publication") and U.S. Patent No. 6,207,694 ("the '694 patent"). For the reasons set forth herein, the Examiner's concerns are overcome.

5. The inventive compositions of the present application show unexpected advantageous properties when compared to the closest cited art.

6. A side-by-side comparative experiment was conducted in my laboratory. The formulation of Example 1 of the present application (inventive, Sample A) was compared to Example 3 from U.S. Patent No. 5,866,152 ("comparative," Sample B). A final sample (Sample C) was prepared based upon U.S. Patent No. 5,866,152 wherein the order of addition of the various components match more closely with the inventive sample. The foregoing formulations are set forth as Table 1 (attached).

7. Table 2 shows the results from three different formulations of the comparative experiment. Sample A is Example 1 of the present application (inventive). Sample A shows no signs of particulates or crystals present over the period of 7 days. Figures 1-3, and 10 show the formulation, stored at temperatures of 5°C, RT and 25°C, respectively.

8. Table 2 shows the results of Sample B (comparative), which is Example 3 of U.S. Patent No. 5,866,152. In contrast to paragraph 7 above, this example shows a crystalline material has settled to the bottom of the glass jar. Figures 4-6, and 11 show the results of Sample B at temperatures of 5°C, Room Temperature and 25°C.

9. Table 2 also shows the results of Sample C (comparative), which is comparative Example 3 from U.S. Patent No. 5,866,152, wherein the order of addition of the various components is more closely in accordance to the inventive formulation of the present invention. Again, at 7 days of storage, all of the samples have a 1 to 2 mm layer of crystalline material that had settled to the bottom of the glass jar. Figures 7-9, and 12 show the results of Sample C at temperatures of 5°C, Room Temperature and 25°C.

10. The results of this 7 day study show that clotrimazole remains in solution with Example 1 from the present invention (Sample A), but not with Example 3 from U.S. Patent No. 5,866,152 regardless of how it was prepared (Samples B & C).

11. It was observed that the clotrimazole did not dissolve in Example 3 from U.S. Patent No. 5,866,152 when prepared as disclosed in the patent specification. When Example 3 was prepared for a second time, following a similar manufacturing method to that outlined in the present application, the clotrimazole did dissolve initially. However, during storage, crystalline material was precipitated from the liquid and it settled to the bottom of the glass jar in which it was stored.

12. Example 3 from the U.S. Patent No. 5,866,152 was not able to produce a single-phase liquid shampoo. Clotrimazole did not dissolve in one version of Example 3 (Sample B)

which was prepared according to the method disclosed in U.S. Patent No. 5,866,152. In another version of Example 3 (Sample C), prepared according to the method disclosed in the present application, the clotrimazole did dissolve initially, but within 24 hours some crystalline material had accumulated.

13. This study demonstrates that the inventive formulation remains as a single-phase shampoo following the initial preparation. The comparative formulation, regardless of the manufacturing technique, was not able to produce a stable single-phase, crystal free liquid which remains in this state.

14. Thus, the inventive formulation remains homogeneous during dispersing whereas the comparative examples will not provide a consistent homogeneous dose of the formulation.

15. For the foregoing reasons, it is my scientific opinion that the present invention possesses unexpected advantageous properties not present in the cited art.

16. I further declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true and further that these statements are made with the knowledge that willful false statements and the like so made may jeopardize the validity of the application or any patent issuing hereon.



Albert Zorko Abram

15 AUGUST, 2005  
Date

60557737 v1

# Curriculum Vitae

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## Personal Details

**Name** Albert Zorko Abram

**Address**  
3 Abbey Court  
Wantirna  
Victoria  
Australia, 3152

## Education

**Post Secondary** Bachelor of Science  
Monash University  
Completed in 1997  
Master of Intellectual Property Law  
Monash University  
Completed in 2004

**Secondary** 1984  
High School Certificate  
Haileybury College

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## Work History

**Job Details** January 2005 – Present  
Senior Chemistry Supervisor & IP Support  
Connetics Australia Pty Ltd  
(Change of title)  
January 2003 – January 2005  
Senior Chemist Technical IP Associate  
Connetics Australia Pty Ltd

**Responsibilities** Oversee and provide technical leadership for company R&D programs in line with agreed corporate objectives  
Liase with intellectual property professionals to facilitate the drafting of patent specifications  
Coordinate technical activities in line with agreed intellectual property areas  
Provide technical advice for intellectual property matters  
Provide technical reviews of intellectual property pertinent to key in-house technologies  
Keep abreast of new technologies and technical developments  
Draft and issue company procedure forms to facilitate the running of the laboratory  
Ensure that the company's quality systems are fully operational at all times  
Interview prospective employees and train the Formulation Chemists in core scientific activities  
Review of monthly technical progress reports  
Provide technical service, advice and assistance to company divisions and clients  
Provide technical leadership to ensure smooth and effective running of the laboratory  
Provide technical advice to company staff and clients as required  
To ensure all work in the laboratory is conducted in a safe manner in line with the company's safety policies

<b>Job Details</b>	July 2001 – December 2002 Senior Chemistry Supervisor Soltec Research Pty Ltd/Connetics Australia Pty Ltd (Company name change to Connetics Australia Pty Ltd in October 2002)
<b>Responsibilities</b>	<p>Manage formulation team projects</p> <p>Prepare formulation development proposals</p> <p>Prepare project plans in consultation with formulation development teams</p> <p>Propose new research proposals and conduct research activities to evaluate project feasibility</p> <p>Keep abreast of new technologies and technical developments</p> <p>Draft and issue company procedure forms to facilitate the running of the laboratory</p> <p>Ensure company's quality systems are fully operational at all times</p> <p>Interview prospective employees and train the Formulation Team's personnel</p> <p>To approve, allocate and coordinate projects to completion</p> <p>Submission of monthly technical progress reports</p> <p>Provide technical service, advice and assistance to company divisions and clients</p> <p>Ensure smooth and effective running of the Dermatology/Formulation Team</p> <p>Ensure an orderly and prioritised progression of all development work and provide technical advice to company staff and clients as required</p> <p>To ensure all work in the laboratory is conducted in a safe manner in line with the company's safety policy</p> <p>Provide technical advice for intellectual property matters</p>
<b>Key Achievements</b>	<p>Contributing author for "Barel/Maibach/Paye :Handbook of Cosmetic Science and Technology"</p> <p>Primary project liaison for key product development programs</p>
<b>Job Details</b>	July 1999 – July 2001 Team Leader, Dermatology Soltec Research
<b>Responsibilities</b>	<p>Manage and coordinate the drafting and issue of MSDS, product specifications, manufacturing methods, product development proposals, reports and procedures.</p> <p>Maintain the computer database relating to research, development and product evaluation work</p> <p>Keep abreast of new technologies and technical developments</p> <p>Draft and issue company procedure forms to facilitate the running of the laboratory</p> <p>Ensure Soltec's quality systems are fully operational at all times</p> <p>Interview prospective employees and train the Dermatology Team's personnel</p> <p>To approve, allocate and coordinate projects to completion</p> <p>Submission of monthly technical progress reports</p> <p>Provide technical service, advice and assistance to company divisions and clients</p> <p>Ensure smooth and effective running of the Dermatology Team</p> <p>Ensure an orderly and prioritised progression of all development work and provide technical advice to company staff and clients as required</p> <p>To ensure all work in the laboratory is conducted in a safe manner in line with the company's safety policy</p> <p>Provide technical advice for intellectual property matters</p>
<b>Key Achievements</b>	Primary project liaison for key product development programs
<b>Reason for Leaving Position</b>	Promotion

<b>Job Details</b>	July 1988 - June 1999 R & D Scientist Soltec Research
<b>Responsibilities</b>	
Maintenance and purchase of laboratory equipment	
Prepare and coordinate project plans	
Process development	
Training staff in the art of formulation chemistry	
Report on research and development activities to management and clients	
Research and development of pharmaceutical, cosmetic, food, household, veterinary, automotive, industrial, aerosol and agricultural products	
Develop manufacturing methods and oversee pilot scale and commercial scale product manufacture	
Source active drug substances, raw materials and packaging for laboratory scale through to commercial scale product manufacture	
Conduct stability trials on product prototypes and commercial products for the purposes of determining physical and chemical stability, packaging compatibility and shelf-life	
Project management of product research and development programs	
Liase with manufacturers of aerosol products, solid dosage forms and liquid dosage forms for the purposes of improving manufacturing methods and product quality	
Preparation of technical reports and product dossiers for Soltec technologies	
Technical assistance for technology transfer	
Technical assistance for internal Business Development and Marketing	
Representing the company attend conferences, technical discussions, trade shows and seminars	
<b>Key Achievements</b>	Development of commercially successful intellectual property and patented products Development of novel and improved technologies for the delivery of consumer product formulations

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<b>Job Details</b>	May 1987 - July 1988 Laboratory Assistant Soltec Research Pty Ltd
<b>Responsibilities</b>	
Perform routine laboratory tasks Acquire hands-on experience and familiarity with common manufacturing equipment and processes in the cGMP manufacture of pharmaceuticals, cosmetics, agricultural, household and aerosol products.	

<b>Reason for Leaving Position</b>	Promotion
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### Short Courses

- December 1997
- How to Supervise People
- Fred Pryor Seminars

August 2000  
Problem Solving & Decision Making  
Kepner Tregoe

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August 2000  
Consultative Relationship Development  
Maura Fay

---

August 2000  
Edward de Bono's Six Hats Thinking  
Advanced Practical Thinking Training Inc.

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September 2000  
Edward de Bono's Lateral Thinking  
Advanced Practical Thinking Training Inc.

---

October 2000  
Project Management  
Kepner Tregoe

---

November 2000  
Microsoft Project 98 Levels 1&2  
Pollak Partners

---

January 2001  
Time Management  
Australian Institute of Management

---

May 2002  
The New Supervisor  
Australian Institute of Management

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May 2003  
International Patent Law for Managers, Engineers and Scientists  
The Center For Professional Advancement

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### **Current Licenses & Accreditation**

Drivers' Licence  
Fork Lift Operator Licence

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## **Current Professional Membership & Registrations**

Association of Profession Engineers, Scientists and Managers Australia  
Australian Society of Cosmetic Chemists  
Monash Alumni Association Inc.

### **Languages**

#### **First Language** English

**Other Languages**

Slovenian - Fluent
Croatian - Fluent
German - Conversational & Written Expression
Italian - Conversational
French - Conversational

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## **Personal Strengths & Other Competencies**

### **Key Strengths & Skills**

Administration - Competent
Budget Preparation - Competent
Computer Literacy - Advanced
Human Resources - Basic
Intellectual Property - Competent
Marketing - Competent
Project Management - Expert
Regulatory Affairs - Competent

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### **Other Key Strengths & Skills**

Lateral thinker
Team Player
Commitment to quality, customer service and customer satisfaction
Ability to match theory with reality
Problem solving skills
Interpersonal skills
Chemical industry experience
Pharmaceutical industry experience
Aerosol product experience
OH&S Representative
Member of OH&S Committee
Member of Innovation Management Team
Involvement in cGMP Manufacturing
Involvement in cGMP Clinical Trials
Preparation of Product Development Proposals
Mechanical aptitude
Common sense

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TABLE I

The following formulations were prepared:

**Sample A: EXAMPLE 1 from the subject patent application**

ITEM	INGREDIENT	%w/w
1	Clotrimazole	2.00
2	Caprylyl pyrrolidone	10.00
3	PEG 400	60.50
4	Cocamidopropyl Betaine	2.50
5	Sodium Cocoamphacetate	4.00
6	Sodium Lauryl Ether Sulfate	7.00
7	Ammonium Lauryl Sulfate	10.00
8	Hydroxypropylcellulose	4.00

Manufactured as per method disclosed in the subject patent application.

**Sample B: Based on EXAMPLE 3 from US patent 5,866,152**

ITEM	INGREDIENT	%w/w
1	Triethanolamine lauryl sulfate	66.70
2	Clotrimazole	2.00
3	Propylene glycol	5.00
4	Distilled water	26.30

Manufactured as per method disclosed in US patent 5,866,152

The final sample formulation is also based on EXAMPLE 3 from US patent 5,866,152. In this case the order of addition is changed to match as closely as possible the manufacturing procedure disclosed in subject application.

**Sample C**

ITEM	INGREDIENT	%w/w
1	Propylene glycol	5.00
2	Clotrimazole	2.00
3	Triethanolamine lauryl sulfate	66.70
4	Distilled water	26.30

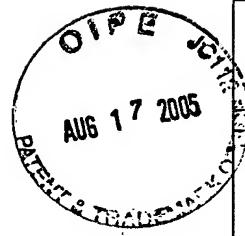
The manufacturing procedure is as follows:

1. Combine together the propylene glycol and the clotrimazole.
2. With stirring, gently warm to ~80 °C to assist with dissolving the clotrimazole. Remove from heat.
3. Continue stirring and add the triethanolamine lauryl sulfate and distilled water. Making sure that each component is mixed in well prior to the next addition

4. If required, filter out any particulates

All the formulation examples prepared were left undisturbed on the laboratory bench to de-aerate prior to storage. Each formulation was filled into 3 x 125mL glass jars with screw top lids. One jar was stored at each of the following temperatures: 5°C, 25°C and at room temperature. Each jar was examined at the initial, 24 hour and 7 day time points and photos taken to record observations.

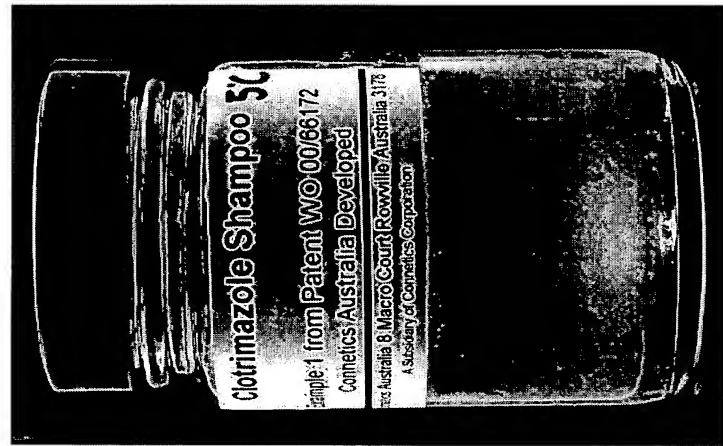
TABLE 2



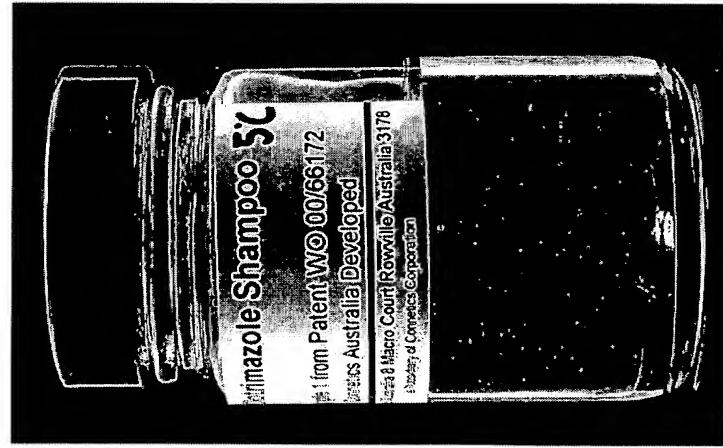
Formulation Details	Time Point	Observations
EXAMPLE 1 from the subject patent application	Initial	Pale yellow liquid with a slightly hazy appearance. No visible particulates or crystals present.
	24 hours	At all temperatures the liquid samples had a pale yellow, hazy appearance. There were no visible particulates nor crystals present.
	7 days	The yellow colour of the liquid samples had a greater intensity as storage temperature increased. There was a transition from a pale yellow colour at 5°C and room temperature to a distinct yellow colour at 25°C. All samples also had a hazy appearance but there were no visible particulates nor any crystals present.
EXAMPLE 3 from US patent 5,866,152	Initial	Cloudy, pale yellow liquid. There was a layer of crystalline material that had settled to the bottom of the glass jar.
	24 hours	At all temperatures the samples had a pale yellow, cloudy appearance with a layer of crystalline material that had settled to the bottom of the glass jar
	7 days	At all temperatures the samples had a pale yellow colour but the 5°C sample had a hazy appearance to it whereas the liquid in the room temperature and 25°C samples were clear. All the samples had a 1 to 2mm layer of crystalline material that had settled to the bottom of the glass jar.
EXAMPLE 3 from US patent 5,866,152 made in accordance to EXAMPLE 1 from the subject patent application	Initial	Pale yellow liquid with a slight hazy appearance. No visible particulates or crystals present.
	24 hours	At all temperatures the samples were pale yellow, clear liquids with a fine layer of crystalline material that had settled to the bottom of the glass jar
	7 days	At all temperatures the samples had a pale yellow colour but the 5°C sample had a hazy appearance to it whereas the liquid in the room temperature and 25°C samples were clear. All of the samples had a 1 to 2mm layer of crystalline material that had settled to the bottom of the glass jar.



5°C AFTER 7 Days



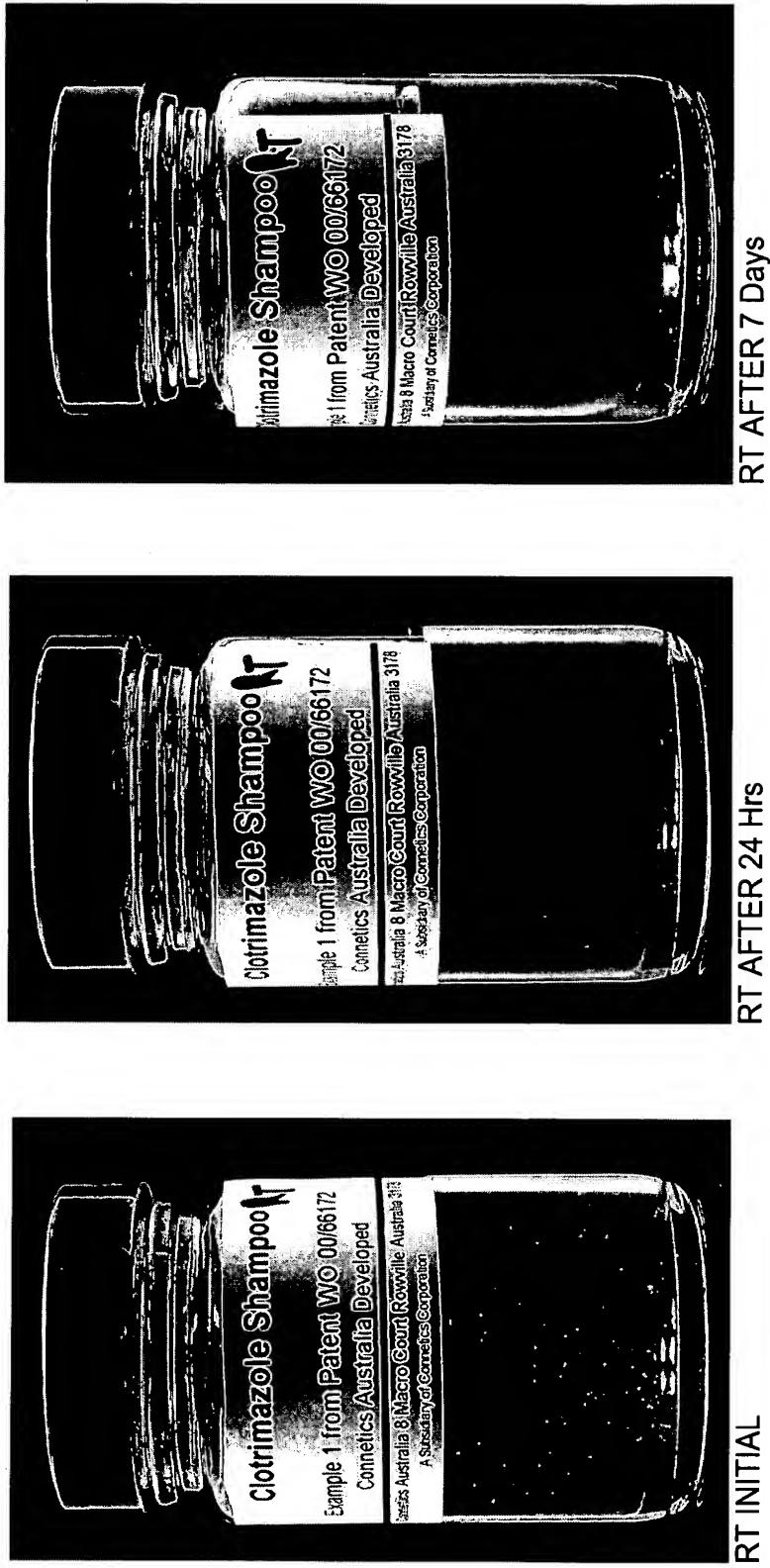
5°C AFTER 24 Hrs



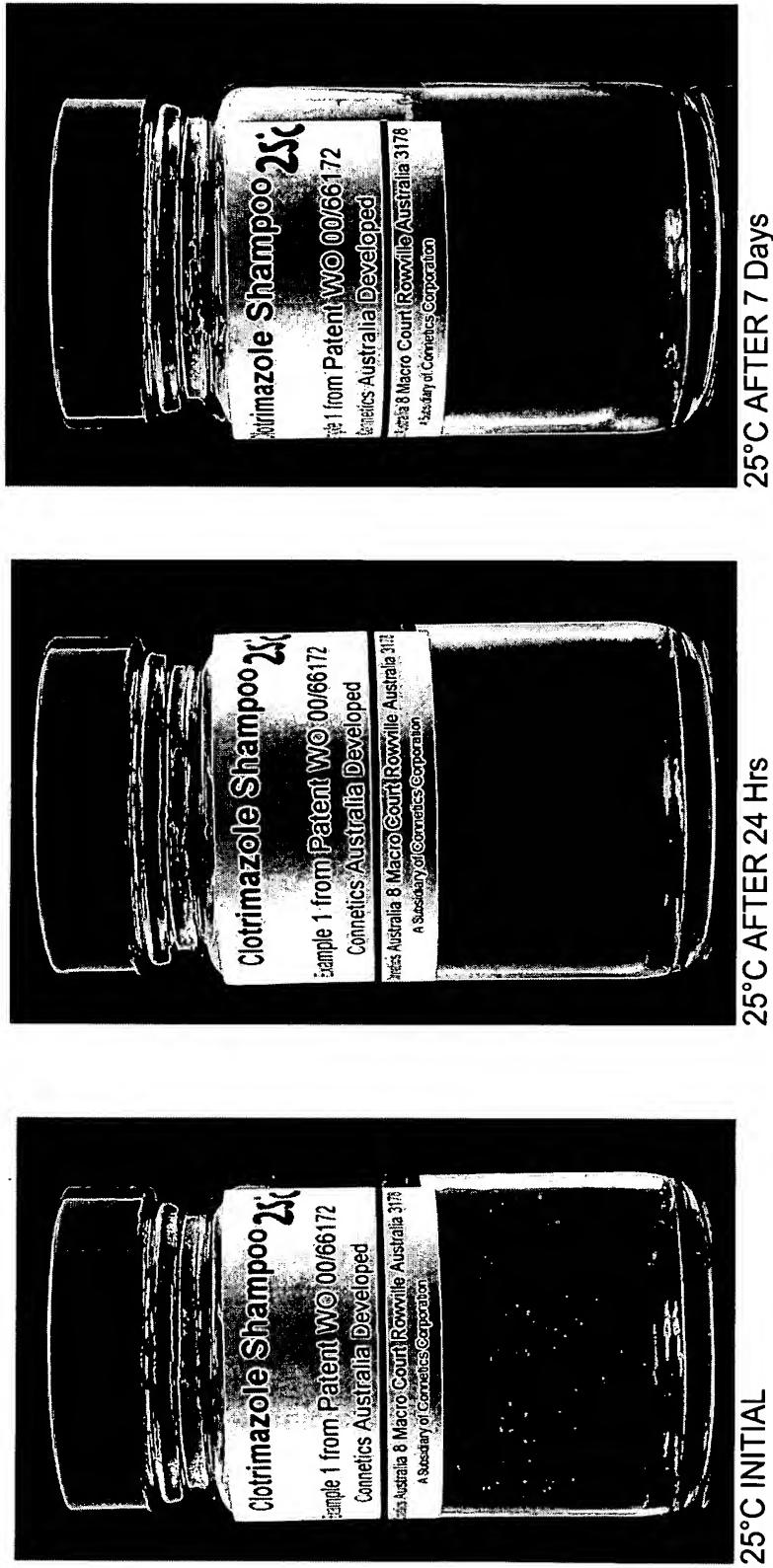
5°C INITIAL

**Figure 1:** Sample A – 5°C. Example 1 from the subject Patent application.  
Photos taken using the Canon PowerShot A400, asset number 00599

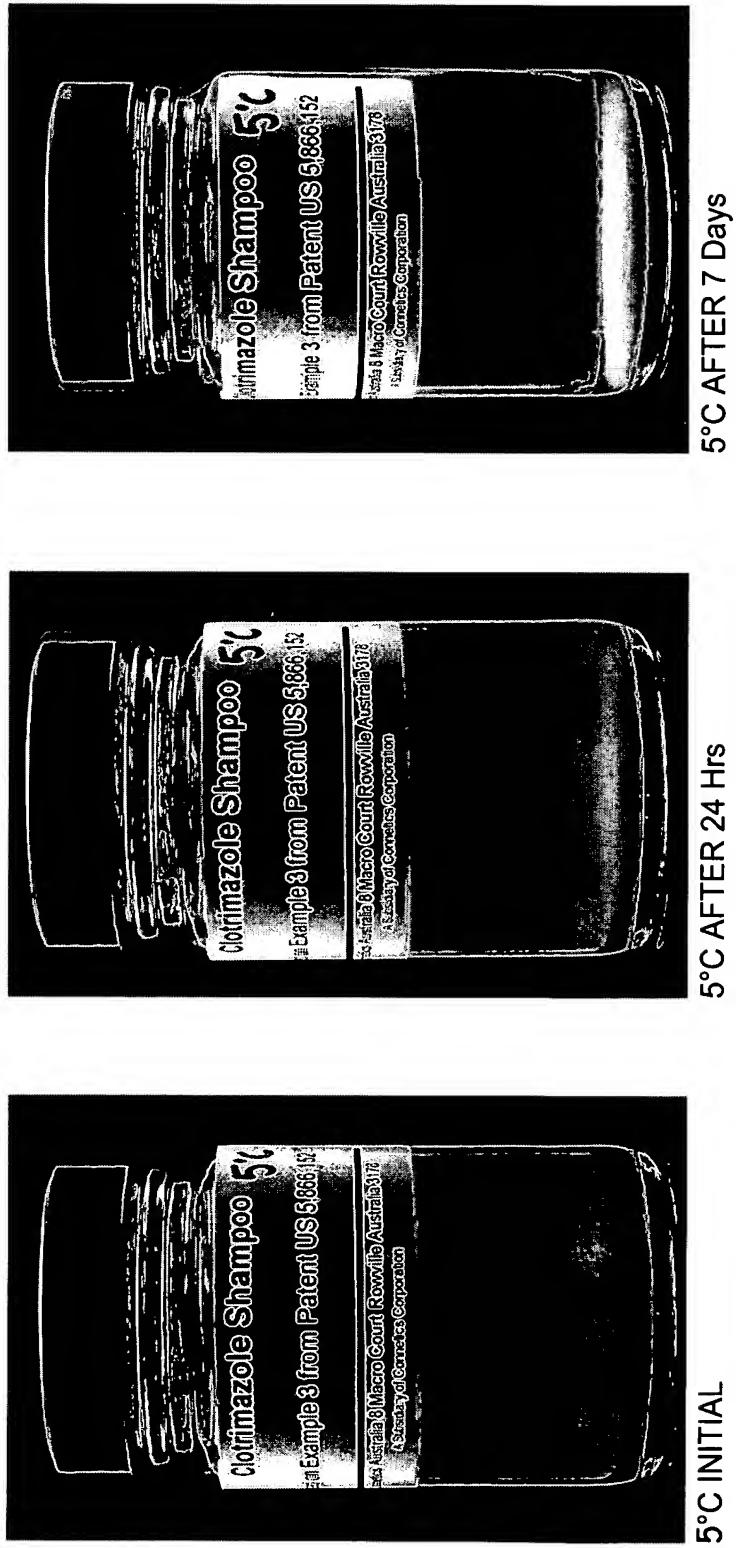
**Figure 2:** Sample A – Room Temperature. Example 1 from the subject Patent application. Photos taken using the Canon PowerShot A400, asset number 00599



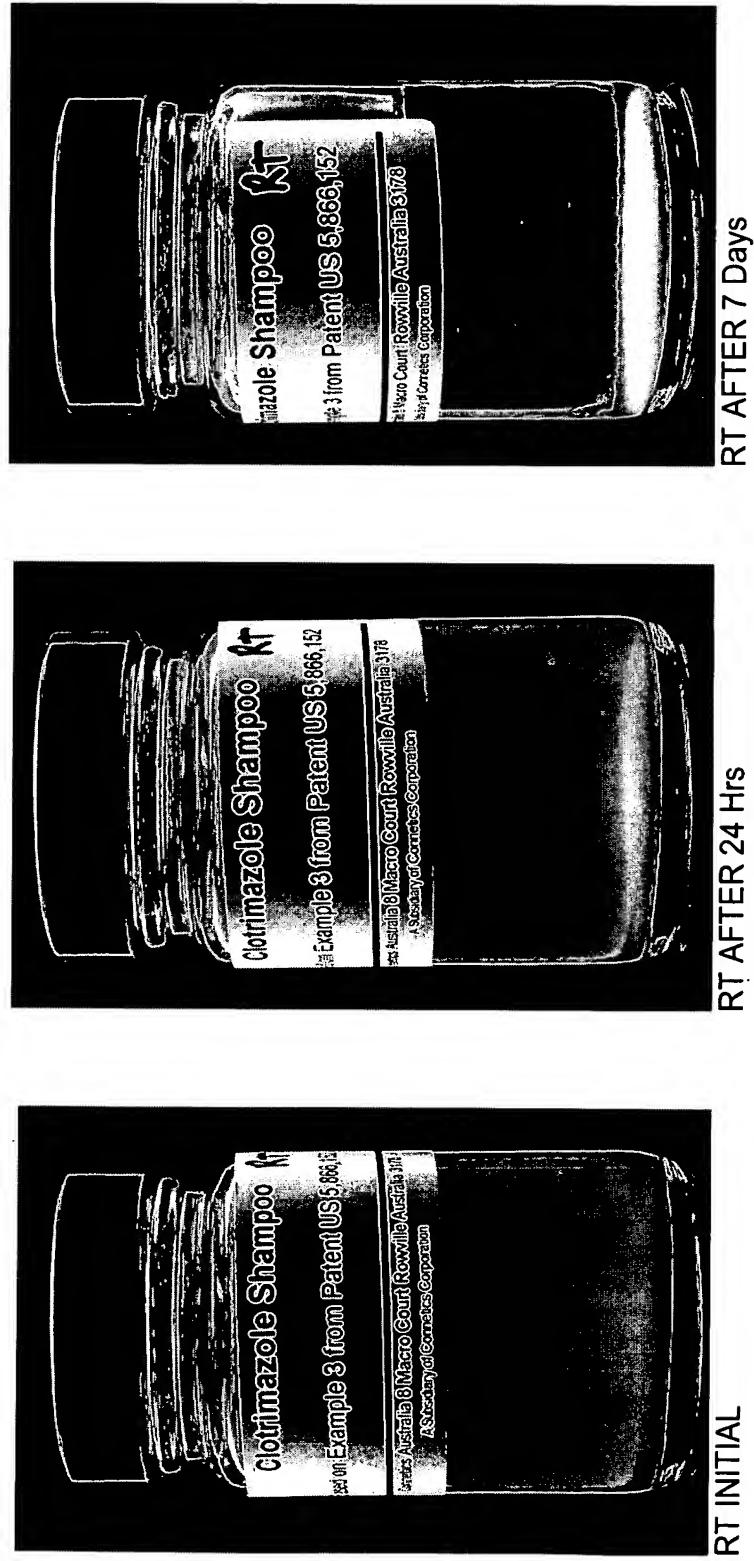
**Figure 3:** Sample A – 25°C. Example 1 from the subject Patent application. Photos taken using the Canon PowerShot A400, asset number 00599



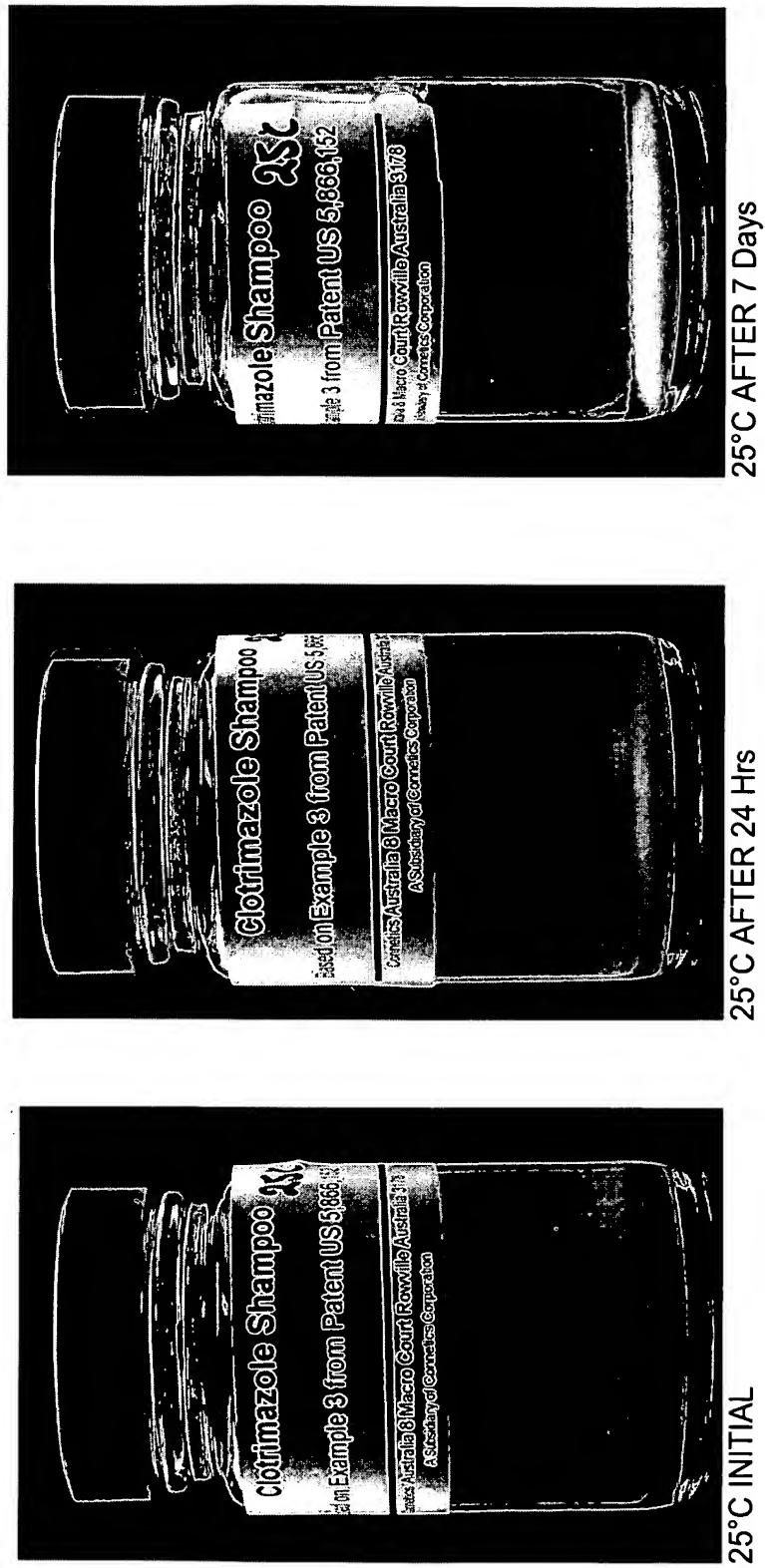
**Figure 4:** Sample B – 5°C. Example 3 from US Patent Number 5,866,152  
Photos taken using the Canon PowerShot A400, asset number 00599



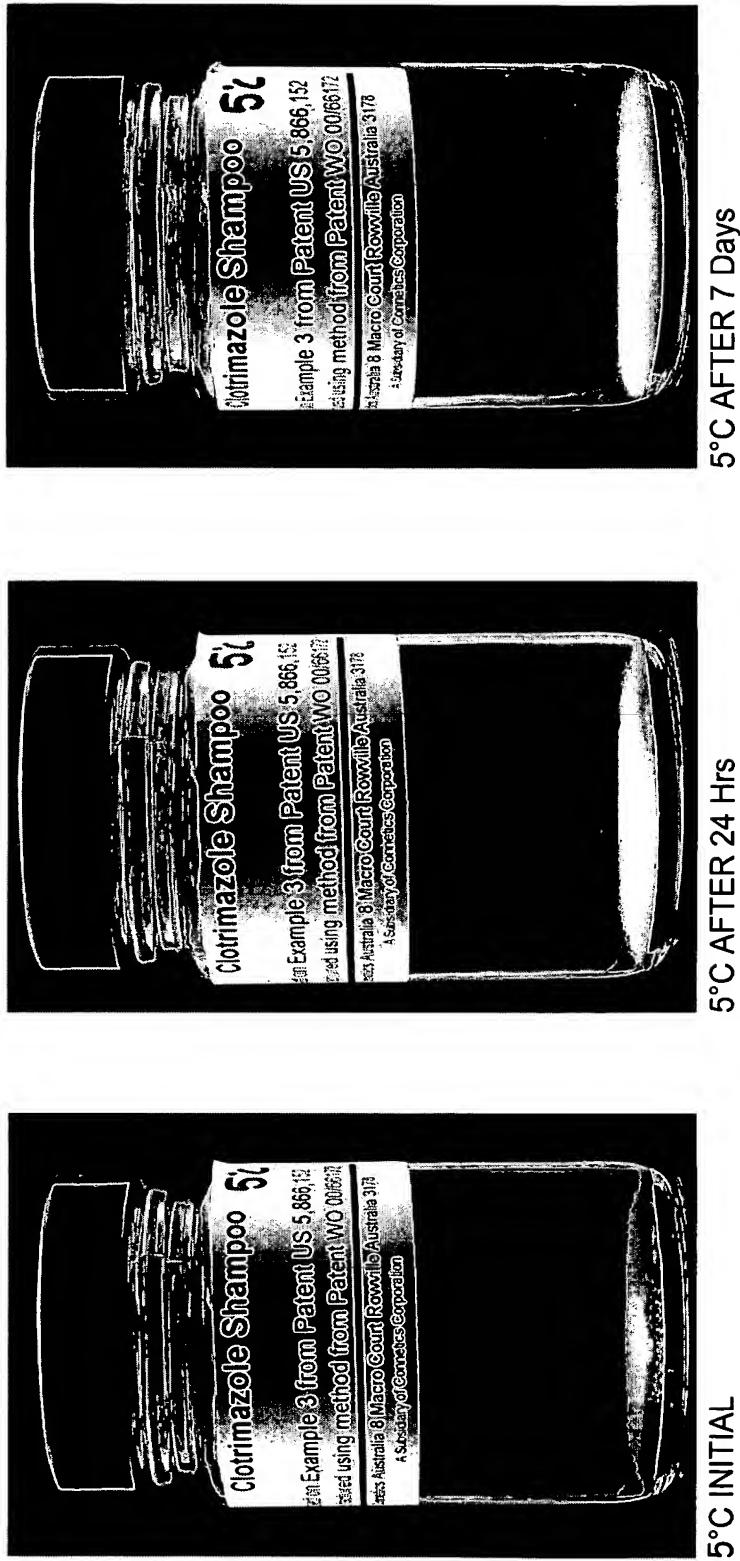
**Figure 5:** Sample B – Room Temperature. Example 3 from US Patent Number 5,866,152  
Photos taken using the Canon PowerShot A400, asset number 00599



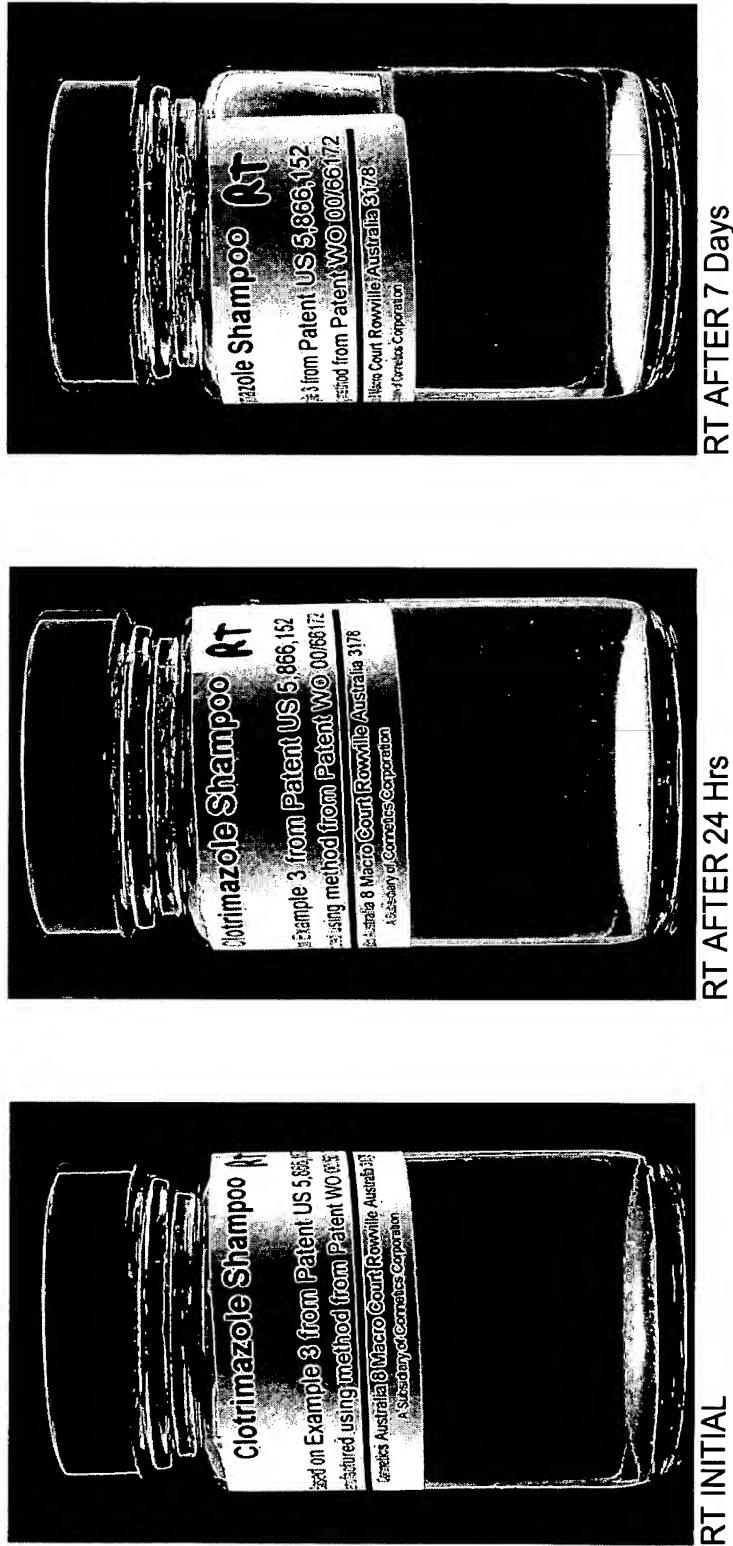
**Figure 6:** Sample B – 25°C. Example 3 from US Patent Number 5,866,152  
Photos taken using the Canon PowerShot A400, asset number 00599



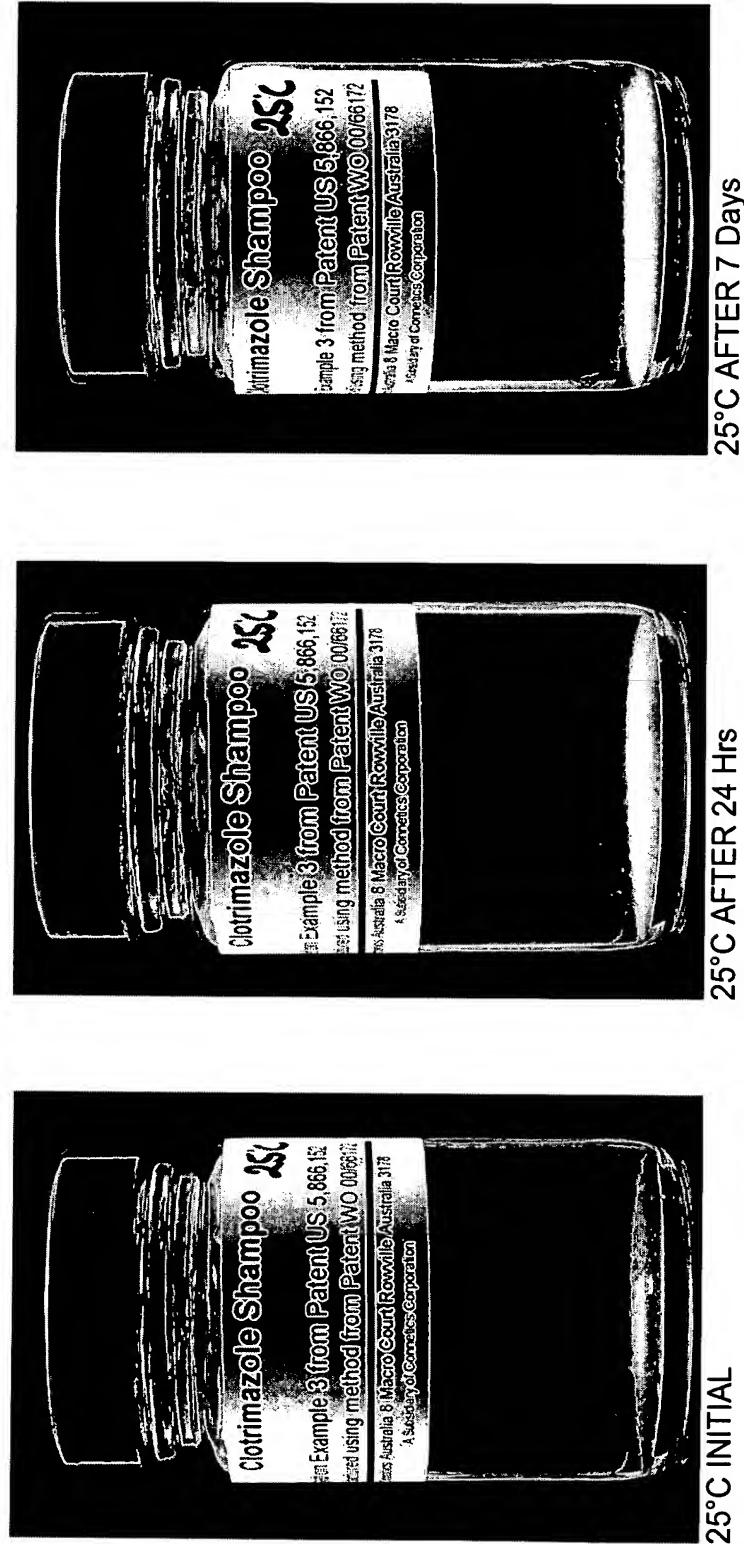
**Figure 7:** Sample C – 5°C. Example 3 from US Patent Number 5,866,152 manufactured as per the subject Patent application. Photos taken using the Canon PowerShot A400, asset number 00599



**Figure 8:** Sample C – Room Temperature. Example 3 from US Patent Number 5,866,152 manufactured as per the subject Patent application.  
Photos taken using the Canon PowerShot A400, asset number 00599

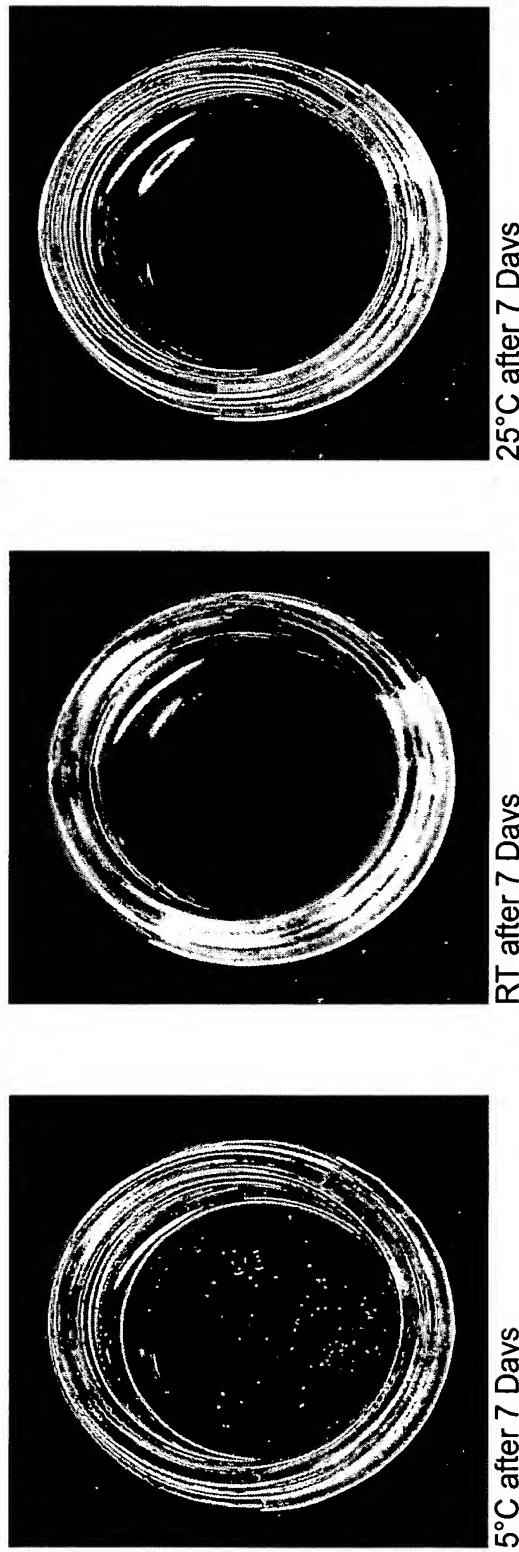


**Figure 9:** Sample C – 25°C. Example 3 from US Patent Number 5,866,152 manufactured as per the subject Patent application.  
Photos taken using the Canon PowerShot A400, asset number 00599



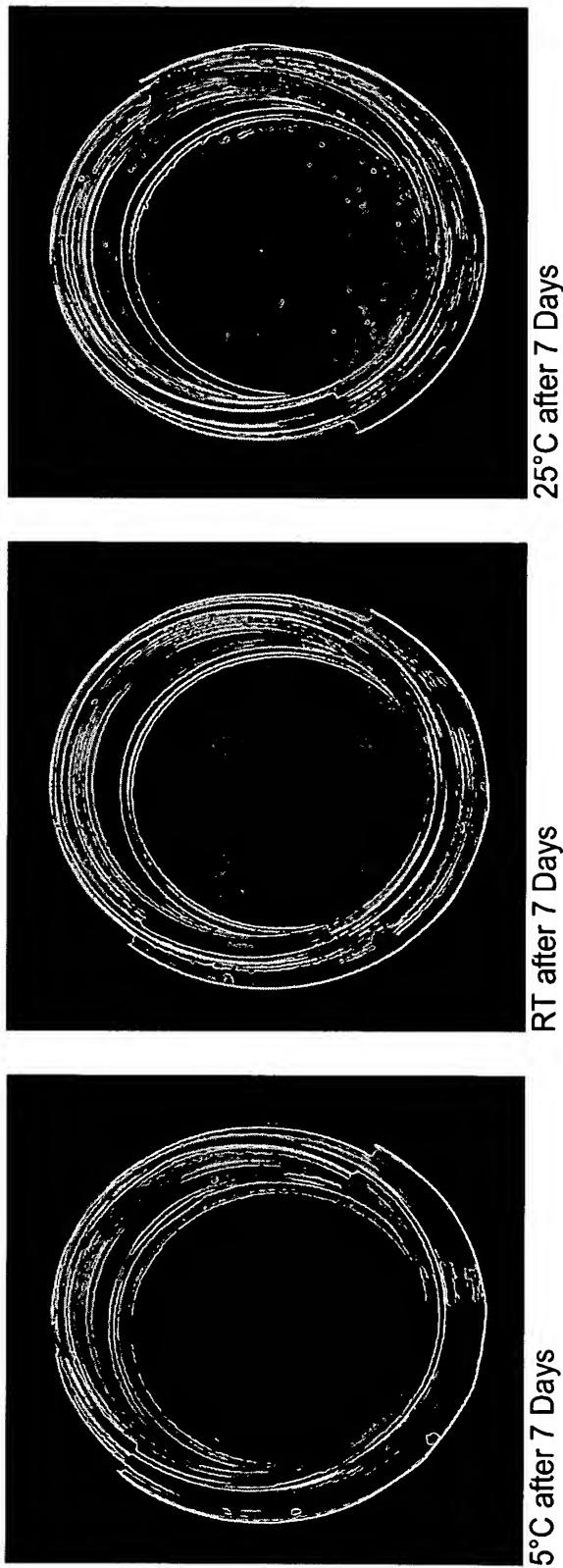
**Figure 10:** Sample A. Example 1 from subject Patent application.  
Photos taken using the Canon PowerShot A400, asset number 00599

**CLOSE-UP PHOTOS OF FORMULATION AFTER 7 DAYS STORAGE (INSIDE THE GLASS JAR)**



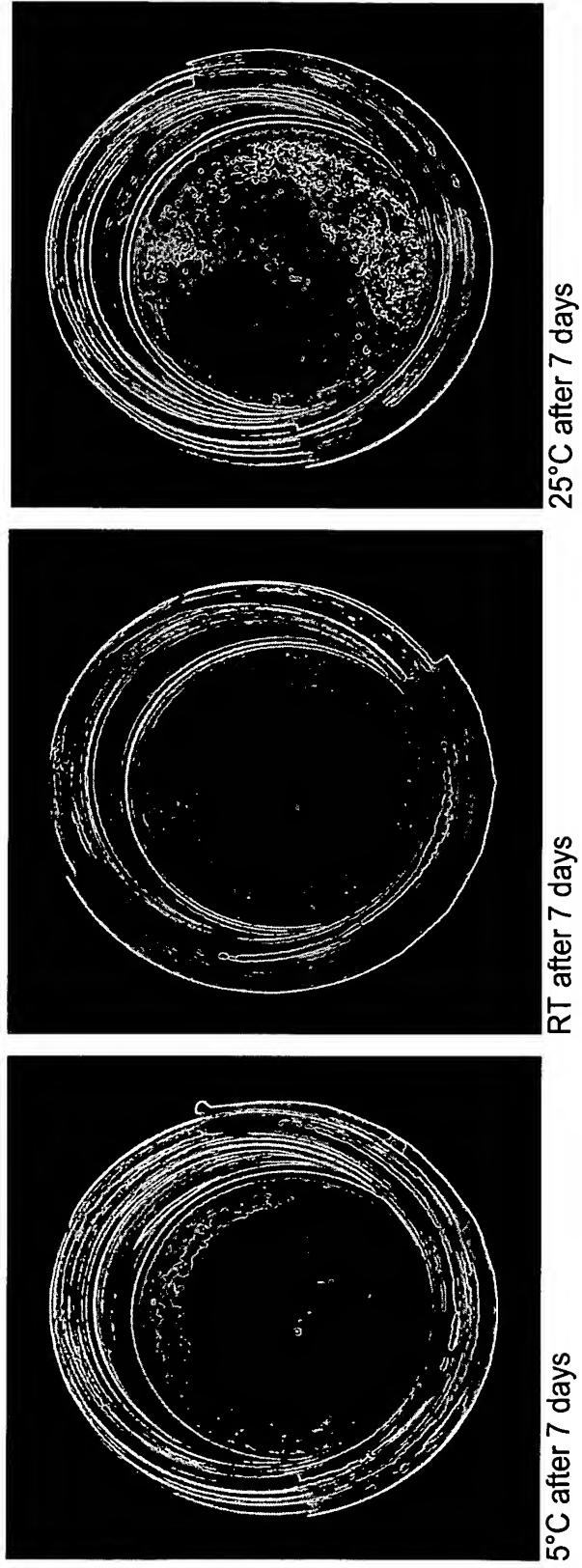
**Figure 11:** Sample B. Example 3 from US Patent Number 5,866,152  
Photos taken using the Canon PowerShot A400, asset number 00599

**CLOSE-UP PHOTOS OF FORMULATION AFTER 7 DAYS STORAGE (INSIDE THE GLASS JAR)**



**Figure 12:** Sample C. Example 3 from US Patent Number 5,866,152 manufactured as per the patent subject application.  
Photos taken using the Canon PowerShot A400, asset number 00599

**CLOSE-UP PHOTOS OF FORMULATION AFTER 7 DAYS STORAGE (INSIDE THE GLASS JAR)**



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